

### **REMARKS**

These remarks are responsive to the Office Action dated June 14, 2005. Currently, claims 1-4, 7-10, and 15-22 are pending in the application with independent claims 1, 7, and 19.

#### **Summary of the Office Action**

In the June 14, 2005 Office Action, the Examiner rejected claims 1-4, 7-10, and 15-22 under 35 U.S.C. 103(a) as being unpatentable over a combination of U.S. Patent No. 6,339,595 to Rekhter *et al.* (hereinafter, "Rekhter") and an IEEE Communications Magazine article entitled "Evolution of Multiprotocol Label Switching" to Viswanathan (hereinafter, "Viswanathan"). These rejections are respectfully traversed.

#### **35 U.S.C. 103(a)**

Claim 1 of the present application recites a virtual private network that includes a first router coupled to the shared MPLS network and configured to dynamically distribute first router Virtual Private Networks (VPN) information across the shared MPLS network, wherein the first router VPN information includes a VPN identifier and a unique IP address which is assigned to the first router; a second router coupled to the shared MPLS network and configured to dynamically distribute second router VPN information across the shared MPLS network; wherein the second router VPN information includes a VPN identifier and another unique IP address which is assigned to the second router; wherein said first and second routers are also configured to establish a plurality of label switched paths therebetween, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path; wherein the VPN identifier assigned to the first router is the same as the VPN identifier assigned to the second router.

According to the Examiner, Rekhter discloses every element of claim 1 but does not teach the shared network being a MPLS network but instead Rekhter discloses a "tag switching"

network. To cure this deficiency the Examiner stated that Viswanathan discloses that tag switching is a prior technology to MPLS. Further, the Examiner stated that claim 1's limitation of establishing plural switched paths comprising multipoint-to-point and multipoint-to-multipoint is not disclosed in Rekhter but is an inherent capability of the MPLS network, according to Viswanathan. However, Rekhter and Viswanathan either by themselves or in combination with each other do not disclose every element of claim 1. As such, a combination of Rekhter and Viswanathan does not establish a *prima facie* case of obviousness. (See, MPEP 2143).

Rekhter discloses a virtual private network that includes edge routers, where each router maintains a "forwarding information database" ("FIB") (Col. 8, lines 55-62). To find a next hop for a particular packet, the routers search the FIB for a longest address prefix that matches an IP (or other network level) address in the packet's network-level destination-address field (Col. 9, lines 1-6). This is contrary to claim 1 of the present application, where each router's VPN information includes a unique IP address. Rekhter further states that it uses an encapsulated IP to determine which direction to use for packet transmission from CE1 router to PE1 router and on to a remote system. The packets, originating from CE1 router, include an IP data-gram that has PE1's network address as its destination address. Further, the packets include a payload address of a remote destination. (Col. 16, line 53 to Col. 17, line 2). Hence, Rekhter does not require the IP addresses to be unique, in contrast to the recitation of claim 1. Also, Rekhter's system's service provider routers send packets destined for hosts whose addresses are not unique. (Col. 18, lines 27-33). As such, Rekhter teaches away from using unique IP addresses for its routers, contrary to the recitation of claim 1. Thus, Rekhter does not teach or suggest unique IP addresses included in the first and second router's VPN information.

Additionally, Rekhter does not teach or suggest that each router has the same VPN

identifier. Rekhter's service providers assign different identifiers to each customer's VPNs. Moreover, the service providers can assign more than one VPN identifier. (Col. 18, lines 34-40). Different VPN identifiers are also assigned in Rekhter's routers to distinguish between different routes to the same destination. (Col. 18, lines 57-67). Hence, Rekhter also teaches away from using the same VPN identifiers for its VPN routers. This is in contrast to the recitation of claim 1, where routers' VPN identifiers are the same. As such, Rekhter does not teach or suggest all elements of claim 1.

Viswanathan describes an evolution of multiprotocol label switching ("MPLS") systems and its applications to various routing systems. According to the Examiner, Viswanathan states that tag switching is a prior art technology to MPLS systems. (Office Action, pg. 4-5) (Viswanathan, Pg. 170, Col. 2). However, Viswanathan does not describe any elements recited in claim 1 of the present application. Instead, Viswanathan discloses and teaches applications of MPLS to ATM networks. Viswanathan does not describe the virtual private networks that are recited in claim 1. According to the Examiner, a limitation of establishing plural switched paths comprising multipoint-to-point and multipoint-to-multipoint is not taught by Rekhter but is an inherent capability of the MPLS network. (Office Action, pg. 5). The Examiner further points to Viswanathan, which discloses point-to-multipoint label switched paths (LSP) that are established along a multicast tree. (Pg. 170, Col. 1).

According to MPEP 2112:

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) ... "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that

a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)...

“In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)...

Thus, the Examiner must provide technical reasoning to support his conclusion that it is an inherent capability of the MPLS network to establish multipoint-to-multipoint and multipoint-to-point paths. Viswanathan only teaches point-to-multipoint paths. (Pg. 170, Col. 1). However, the fact that point-to-multipoint paths are established along a multicast tree is not sufficient to show that multipoint-to-multipoint and multipoint-to-point paths are an inherent capability of the MPLS network. According to MPEP 2112, the Examiner must provide some extrinsic evidence to show that such paths are an inherent capability of the MPLS network. The Examiner did not provide such evidence in the office action. As such, neither Rekhter nor Viswanathan teach or suggest establishing multipoint-to-multipoint and multipoint-to-point paths, as recited in claim 1.

Since, neither Rekhter nor Viswanathan nor their combination teach or suggest every element of claim 1, claim 1 should be allowed.

Even if *arguendo* one were to combine Rekhter and Viswanathan, the present invention would not be realized. Specifically, a combination of Rekhter and Viswanathan would result in a virtual private network with MPLS capabilities, having routers with varying VPN identifiers and IP addresses that are not unique. Further, the combination of the references is not capable of establishing multipoint-to-multipoint and multipoint-to-point paths between routers. In contrast, the combination is only capable of establishing point-to-multipoint paths. Additionally, the combination of Rekhter and Viswanathan does not teach or suggest a virtual private network,

where each router includes VPN information having a unique IP address and a VPN identifier, where each router's VPN identifier is the same, and where routers are capable of establishing multipoint-to-multipoint and multipoint-to-point paths between them.

Claim 1 is not rendered obvious in light of a combination of Rekhter and Viswanathan and this rejection is traversed. The Examiner is respectfully requested to reconsider and withdraw his rejection of claim 1.

Claims 7 and 19 are not rendered obvious in light of the combination of Rekhter and Viswanathan for at least the reasons stated above with respect to claim 1. Thus, these rejections are traversed as well. The Examiner is respectfully requested to reconsider and withdraw his rejection of claims 7 and 19.

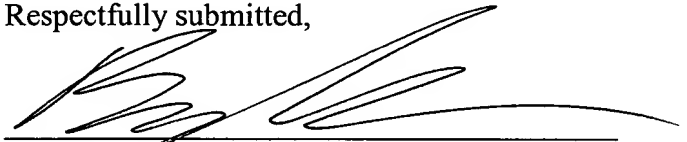
Claims 2-4, 8-10, 15-18, and 20-22 depend from independent claims 1, 7, and 19, respectively. As such, claims 2-4, 8-10, 15-18, and 20-22 are patentable over a combination of Rekhter and Viswanathan for at least the same reasons stated above with respect to claim 1. Thus, this rejection is traversed as well. The Examiner is respectfully requested to reconsider and withdraw his rejection of claims 2-4, 8-10, 15-18, and 20-22.

No new matter has been added.

The claims currently presented are proper and definite. Allowance is accordingly in order and respectfully requested. However, should the Examiner deem that further clarification of the record is in order, we invite a telephone call to the Applicants' undersigned attorney to expedite further processing of the application to allowance.

Date: October 14, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Boris A. Matvenko', is written over a horizontal line.

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